Visual Design Portfolio Analysis

"The good, the bad and the ugly."

IBM

DESIGN MATTERS.

Dashboards have become a standard business tool, to communicate key pieces of information and help drive smarter business decisions.

The key to effective dashboard design goes beyond simply presenting data on screen with enticing, flashy visualisations and bright colours for added 'sizzle'. The best dashboards provide real, informative insights that contribute toward user outcomes.

This booklet will lead you through a set of example dashboards or reports which examine certain visual elements that either work or fail within a design.

Dashboards should be:

1 User-Centered

- Purposeful & focused
- Focuses on user outcomes
- Solves the right business problems

2 Story Related

- Connects insights together
- Links visualizations to context
- Builds emotional connections with users

3 Intuitive

- Readable content within 5 seconds
- Clear & concise with limited visual clutter
- Organised insights into a logical hierarchy

4 Visually Engaging

- Less is more
- Communicates purpose
- Stimulating visual principles applied

Hierarchy   Emphasis

Proximity   Consistency

Alignment   White Space

Color   Backgrounds

VISUAL DESIGN PRINCIPLES.

Effective visual design drives adoption by communicating key information clearly and efficiently to users.

We must ensure that our dashboard designs not only make the most important information stand out on page but to also arrange these elements in a way that fits purpose, gives meaning and supports the overall goal.

Listed are the following visual design / Gestalt principles that we must consider to improve usability and present a clean, impactful design.

Hierarchy

- Organise content based on level of importance.
- Key information to be displayed first, at the top.
- Group related data together.
- Use size and positioning to influence hierarchy.
- Guide your users through a logical flow that makes sense to them.

Consistency

- Interactions with charts, buttons or navigation should be identical across all pages.
- Ensure colors are kept consistent across your dashboard. Use the same colors for visualizations, title headings and navigation.
- Use same styles for fonts, labels, functions and icons.

Alignment

- Align your charts and titles to a grid.
- Incorporate horizontal and vertical alignment.
- Do not randomly place elements on screen.
- Make sure everything lines up neatly.

Background & Font

- Use simple, plain colors for backgrounds.
- Avoid distracting images or patterns.
- Stick to maximum of 2 fonts only.
- Use no more than 3 sizes in that font type.
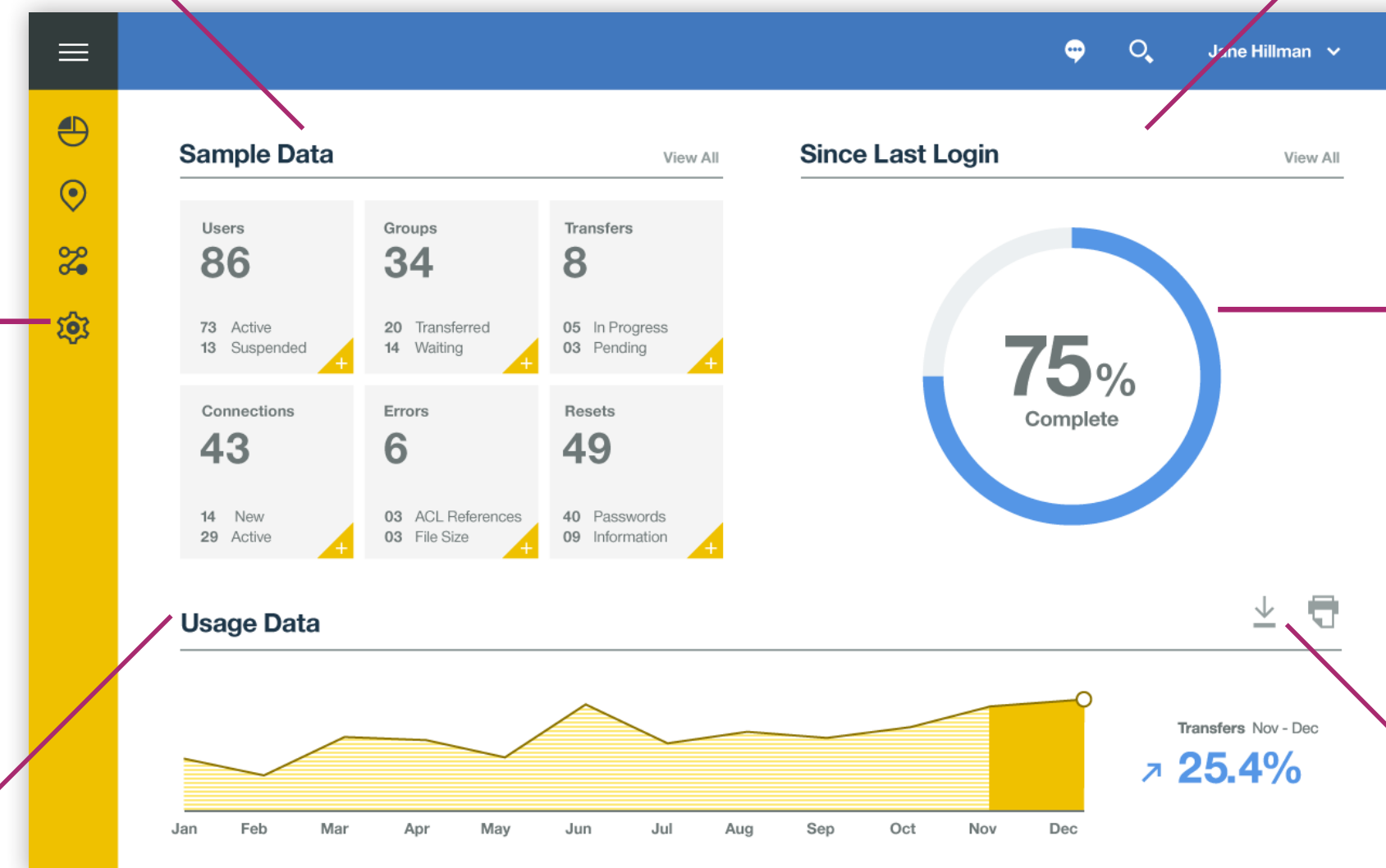- Ensure all titles/headings have same font sizing.

White Space

- Create visual pauses between elements.
- Use padding, margins and space to let your elements breathe.
- Frame your content with effective white space.
- Do not clutter your dashboard and cram everything in. Add breathing space around your visualizations.

Emphasis

- Emphasise important elements using size or color.
- Highlight what's important.
- Direct readers with emphasis for users to know where or which element to interact with first.
- Fewer focal points means higher emphasis.

Color

- Stick to a maximum of 4 colors and use tints/hues.
- Only use contrasting, accent colors to highlight, notify or draw attention.
- Consider your audience and account for color accessibility.

Proximity

- Group common elements with similar themes, together.
- Work with your hierarchy to consider which elements should be placed near each other.
- Color and shape can override the laws of proximity.

Dashboard (central image)

Sample Data View All

Users 86	Groups 34	Transfers 8
73 Active / 13 Suspended	20 Transferred / 14 Waiting	05 In Progress / 03 Pending

Connections 43	Errors 6	Resets 49
14 New / 29 Active	03 ACL References / 03 File Size	40 Passwords / 09 Information

Since Last Login View All

75% Complete

Usage Data

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Transfers Nov - Dec ↗ 25.4%

Jane Hillman

Time To Practice

Design Principle	Good	Bad
Hierarchy		
Consistency		
Alignment		
Backgrounds		
Color		
Proximity		
Emphasis		
White Space		
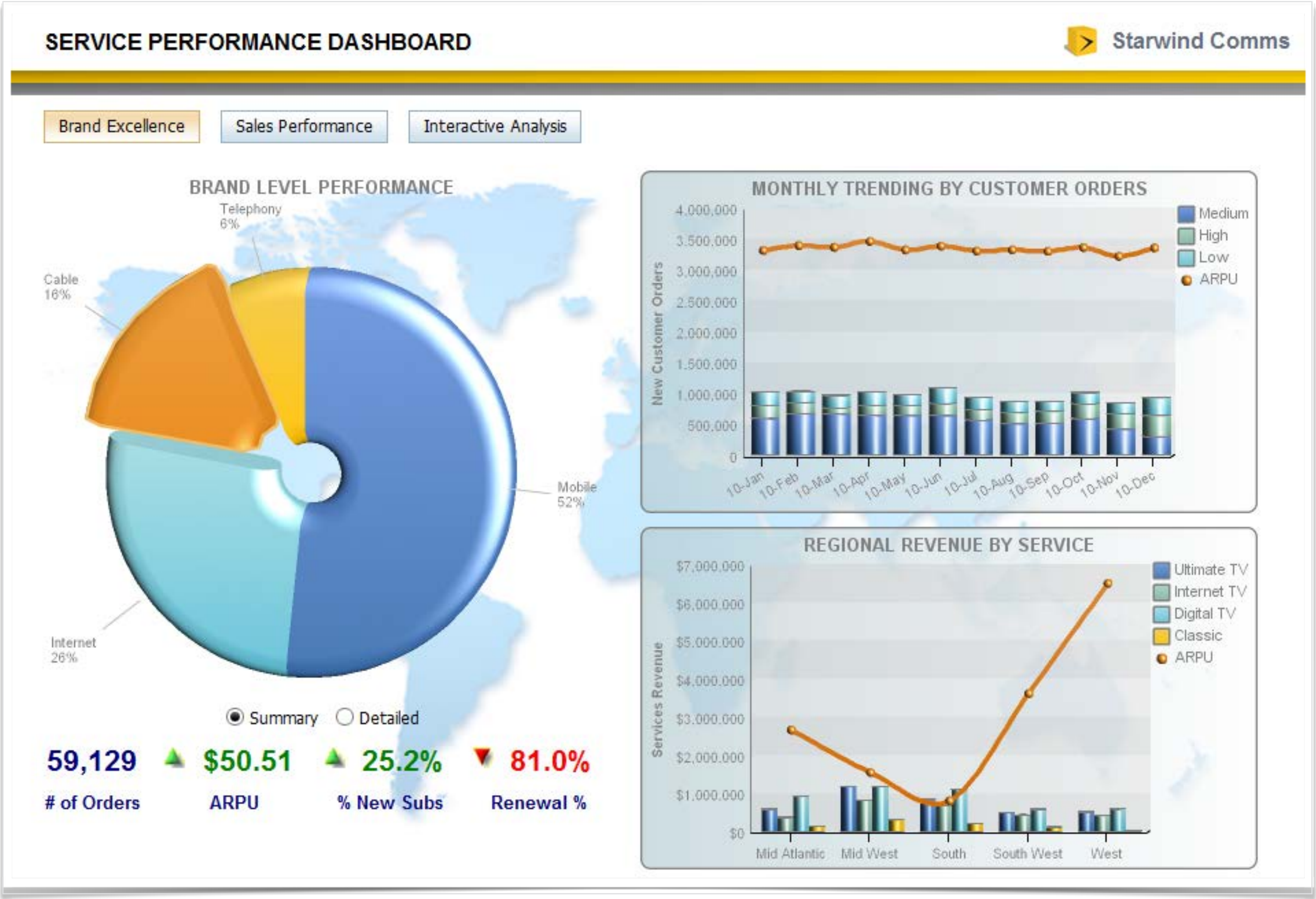
Design Principle	Good	Bad
Hierarchy		
Consistency		
Alignment		
Backgrounds		
Color		
Proximity		
Emphasis		
White Space		

Design Principle	Good	Bad
Hierarchy		
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Emphasis		
White Space		

Examples

Let's assess all the elements.

❌ No Titles

- A number of charts are missing their titles which means the user is left guessing as to what they are looking at.

❌ Emphasis

- The main title here lacks emphasis.
- It blends in with the rest of the background and charts on screen.
- By increasing its size and adding in color, this will help improve it's level of importance.

❌ White Space

- All charts again, have been crammed in with zero space between them, leaving no room to breathe.
- This will disrupt reading flow and confuse users.
- Add in gaps between charts.

❌ Proximity

- All charts and filters look too randomly placed.
- All elements are too close to one another and due to no visual hierarchy, it leads viewers making their own assumptions on where to focus.
- There is no indication as to which filter interacts with which chart.

❌ Color

- Too many distracting colors overall with each chart.
- Random selection of colours have been used and there is no consistency at all.

❌ Alignment

- There is no vertical or horizontal alignment applied here at all.
- This leads to confusing users and results in poor readability.

❌ Hierarchy

- All of these charts look very disorganised and lack context.
- There is no flow or direction as to which chart to glance at first, then the next.

❌ Background

- Unnecessary map in the background.
- Distracting.
- Ask the question, what value does this bring?

❌ Excessive Detail

- Unnecessary label of "4,000,000" when this can be simplified to 4M.
- Extra annotation can be added with the Y axis to mention values are in (M).
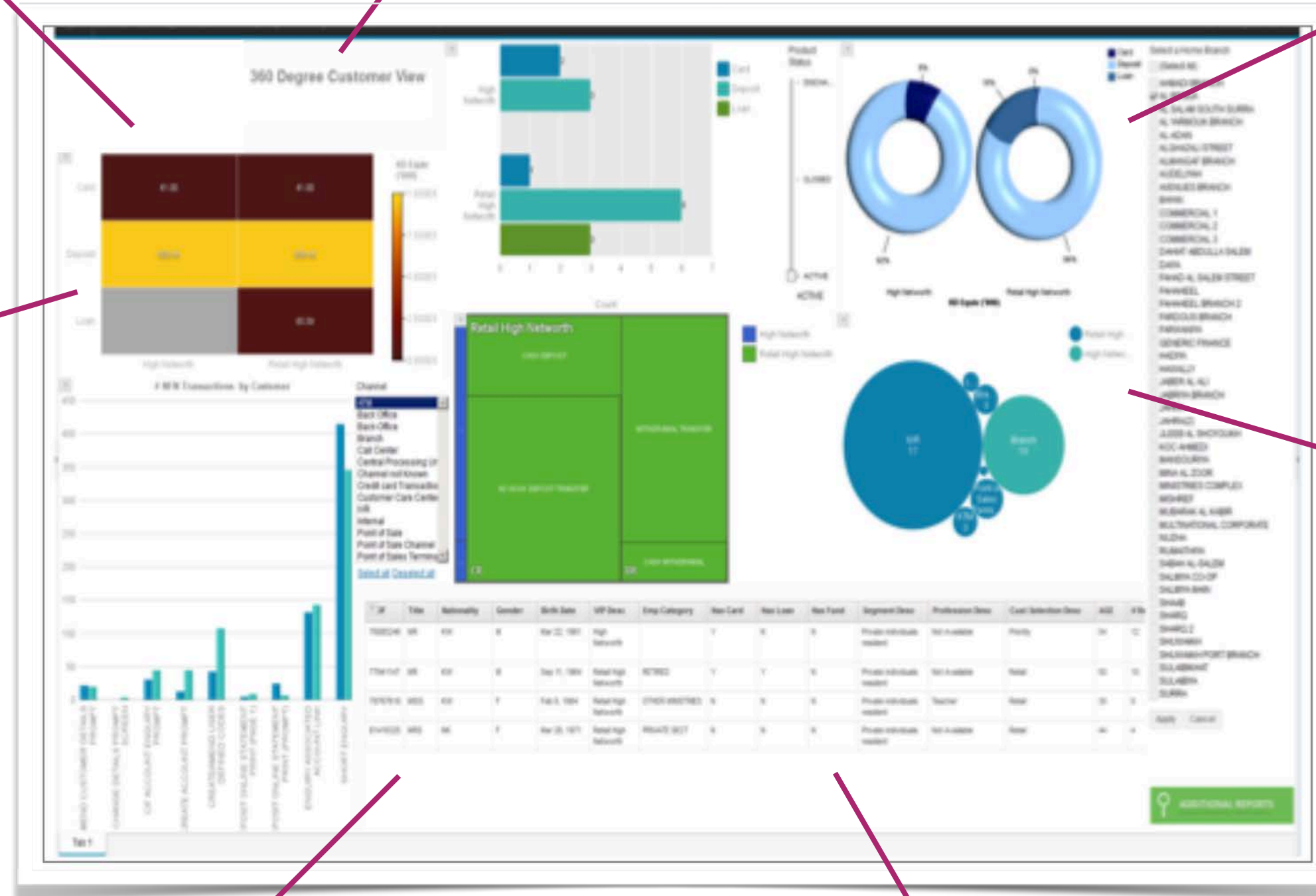
❌ 3D Charts

- 3D visualisations distort data, no matter how "eye-catching" you think it may look.
- Viewers can process information in a bar graph much more quickly and easily than the information on a pie chart.

❌ Chart background

- Unnecessary gridlines. Remember, less is more.
- Let the data stand out for itself and remove any unnecessary add ons such as background colour and gridlines.

✅ Emphasis

- This pie chart has been emphasised through size, compared to the remaining charts which draws the eyes and attracts attention.
- Our eyes are immediately drawn to this first, which emphasises its level of importance.

✅ White Space

- Sufficient breathing space around each chart.
- The overall design does not feel too cramped.

SERVICE PERFORMANCE DASHBOARD

Starwind Comms

Brand Excellence | Sales Performance | Interactive Analysis

BRAND LEVEL PERFORMANCE

Telephony 6%
Cable 16%
Mobile 52%
Internet 26%

○ Summary ○ Detailed

59,129 ▲ | $50.51 ▲ | 25.2% ▲ | 81.0% ▼
# of Orders | ARPU | % New Subs | Renewal %

MONTHLY TRENDING BY CUSTOMER ORDERS

New Customer Orders
4,000,000
3,500,000
3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0

Medium, High, Low, ARPU

10-Jan, 10-Feb, 10-Mar, 10-Apr, 10-May, 10-Jun, 10-Jul, 10-Aug, 10-Sep, 10-Oct, 10-Nov, 10-Dec

REGIONAL REVENUE BY SERVICE

Services Revenue
$7,000,000
$6,000,000
$5,000,000
$4,000,000
$3,000,000
$2,000,000
$1,000,000
$0

Ultimate TV, Internet TV, Digital TV, Classic, ARPU

Mid Atlantic, Mid West, South, South West, West

❌ Insufficient context

- Inadequate context for data with the KPI status icons.
- Doesn't tell us how good, or how bad it is.

✅ Alignment

- KPIs, charts, buttons and titles have all been correctly aligned.
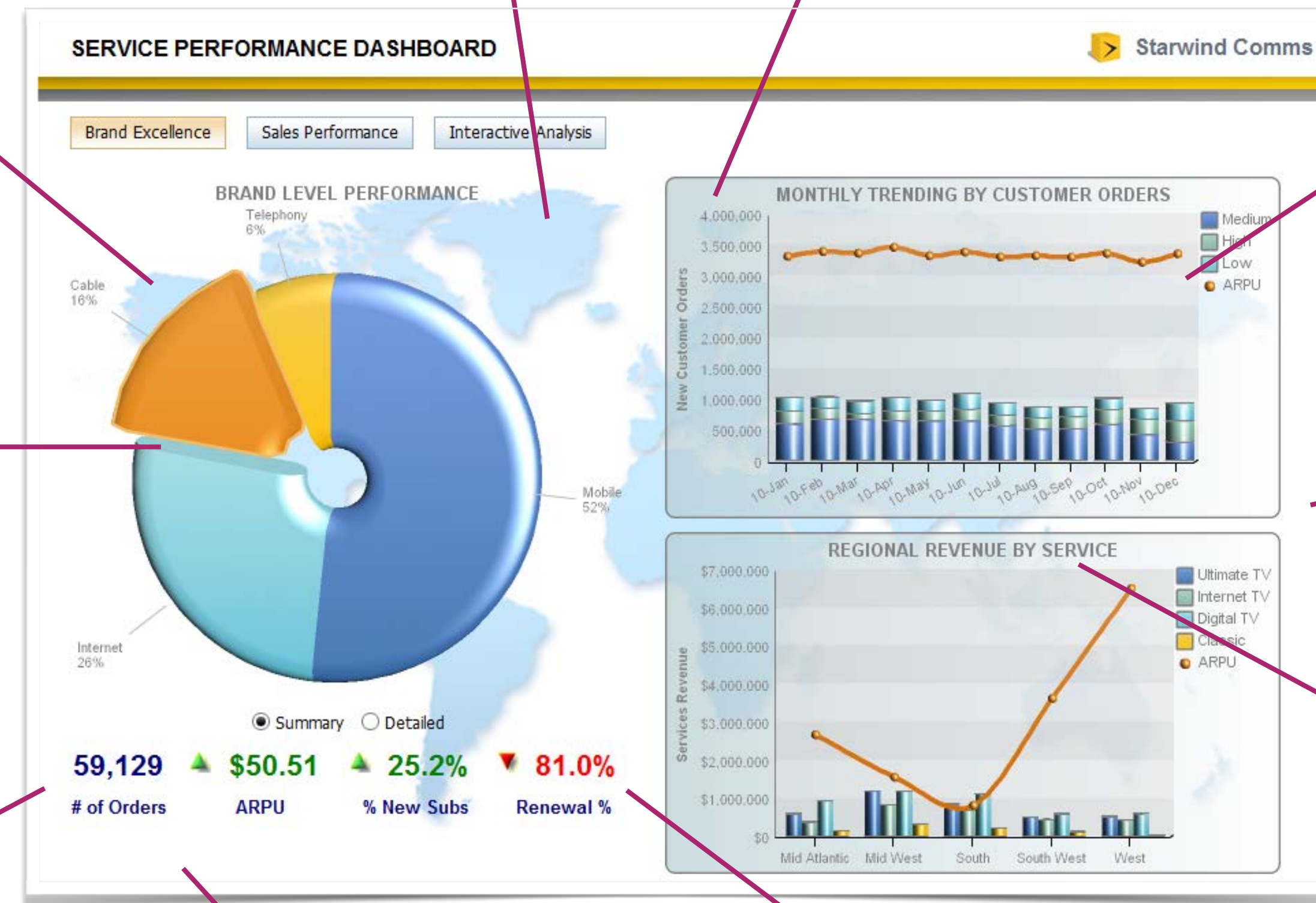
✅ Color Meaning

- The choice of color indicates very clearly, a positive or negative increase/decrease, adding context.

✅ Chart Labels & Titles

- All charts are correctly labelled and gives context to the user as to what they are looking at.

Hierarchy ✖
- Poor arrangement of information.
- There is no clear visual hierarchy to help guide us where to look first. All charts seem to be placed just anywhere.

Emphasis ✖
- There is no clear individual emphasis on one or two charts, leading viewers unsure what to focus on.

Table design ✔
- Correct use of color, to apply to headings and selected row.
- No excessive use of gridlines, this table is kept simple.
- Correct alignment with headings and data.

Consistency ✔
- All chart titles are correctly formatted with consistent use of background colors.

White Space ✖
- All charts have been crammed in with zero space between them, giving no room to breathe.
- This can be quite overwhelming for users and disrupts flow.

Font size too small ✖
- Labels or metrics aren't easy to read.

Color ✖
- Overuse of color within the whole report.
- Too many bright colors demanding attention. These should be kept to a minimum, using them only to highlight key data.

Alignment ✔
- Although this is a very busy report, correct alignment has been applied to portray 3 separate columns on screen.

White Space ✖
- There are more than 10 visualizations on page here with no room to breathe.
- Too cluttered.

Chart Titles ✓
- Every chart here has a correctly labelled title to inform the user as to what they are looking at.
- They each are consistent in style and formatting.

Correct axis labels ✓
- All charts have been labelled correctly by simplifying the labels from "30,000" to "30K".

Poor chart choice ✗
- Users are unable to tell which data category we are currently viewing in the chart.
- There is no context around what we are looking at.

Too much data ✗
- It is hard to distinguish between each line, as there are too many shown in the chart.
- You are unable to determine which category is which and follow it across time without distraction.

Backgrounds ✓
- Simple, clean light background for each chart and overall design works well to let the data "speak".

Business Insight Dashboard

Sales vs Profits

Regional Sales

Profits Over Time

Product Category
- Furniture
- Office Supplies
- Technology

Product Container
- Jumbo Box
- Jumbo Drum
- Large Box
- Medium Box
- Small Box
- Small Pack
- Wrap Bag

Order Priority
- Critical
- High
- Low
- Medium
- Not Specified
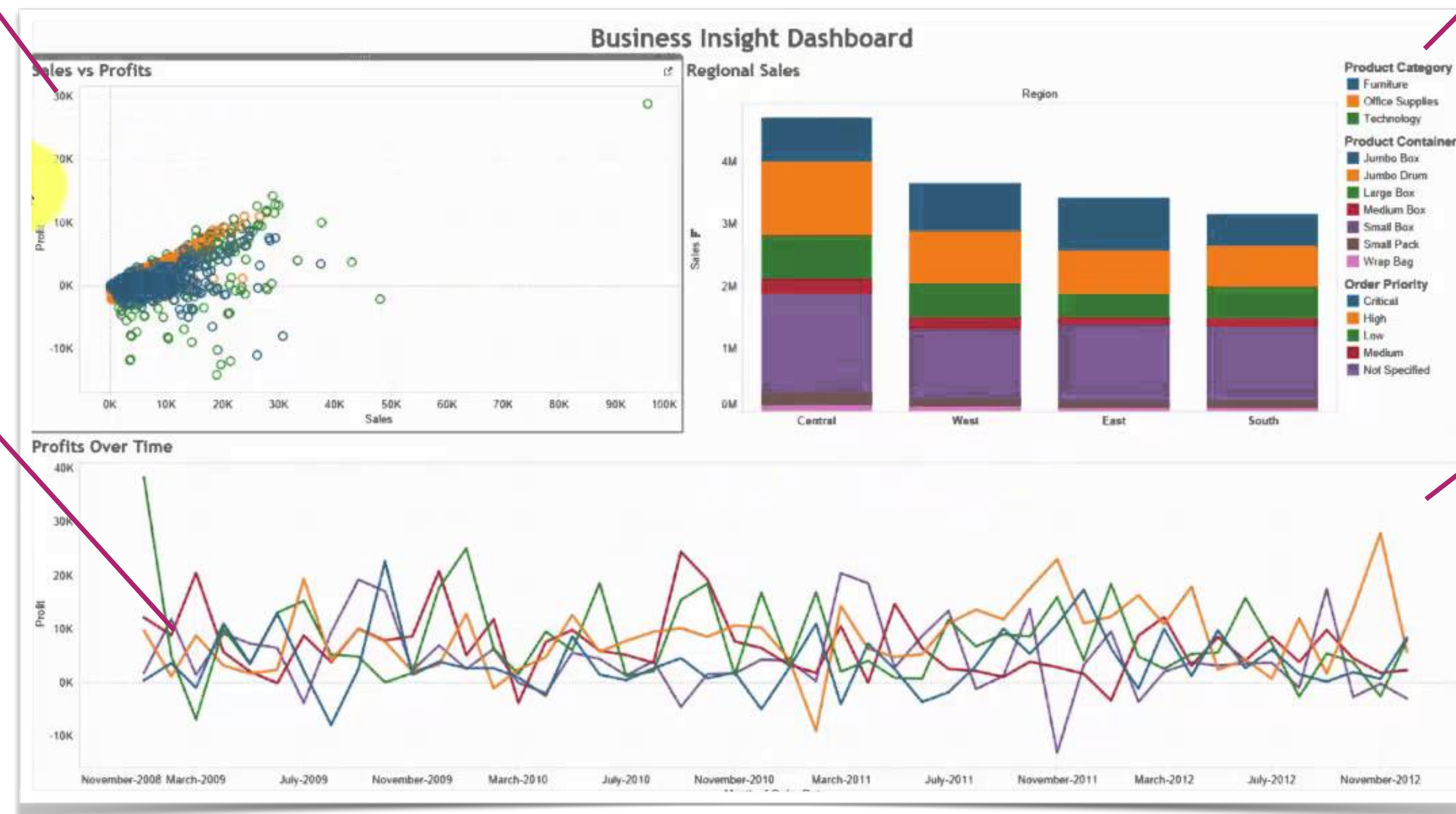
⊗ Backgrounds

- Unnecessary pattern added in the background.
- Slightly distracting.

⊗ No Titles

- There is no overall title to provide context around the dashboard's purpose.
- There is also no main title for these dials presented on screen.

2016 2015 2014

مؤشر جودة الخدمات الإلكترونية/الذكية

مؤشر جودة المواقع الإلكترونية

مؤشر مستوى التوعية العامة عن الخدمات الإلكترونية / الذكية

مؤشر مستوى الرضا عن الخدمات الإلكترونية/ الذكية

مؤشر نسبة استخدام الخدمات الإلكترونية/ الذكية

مؤشر نسبة النمول الإلكتروني/ الذكي للخدمات الحكومية

⊗ Chart Context

- There are no labels indicating the measures of each dial.

⊗ Chart Context

- There is no indication around which dial is showing "current" and which is "target".

✓ Alignment

- Each dial is correctly aligned both vertically and horizontally which helps with easy reading.

⊗ Hierarchy

- Poor arrangement of information.
- There is no clear visual hierarchy to help guide us where to look first.

✓ Overall colors

- The overall "look" of this dashboard works okay and colours compliment each other.
- However, the range of colours used in the Treemap and Word Cloud almost seem too excessive.

⊗ Visualization choice

- As there is almost too much data being presented here, it's difficult to determine by size, the ranking of these types of requests.
- We can see that "New Tree Requests" is the top service request, however what's the context here? Across what timeline?

✓ Backgrounds

- A clean white background is used here which lets the data speak.
- There are no distracting images or patterns used.

⊗ No titles

- Four out of five charts show no titles, which will leave the user guessing as to what data is being visualised.

White Space

- There is sufficient white space surrounding the icon logo inside the navigation bar.
- Overall, the design feels clean and white space has been added around each chart which contributes to this.

Emphasis

- Large, emphasised title to state the dashboard's purpose. This is clear and colour contrast is added to make it stand out.

Annotated Filters

- The filters include extra annotation to help inform the user.

Chart Labels

- Charts axis should always start at zero.

Chart Titles

- Every chart here has a correctly labelled title to inform the user as to what they are looking at.
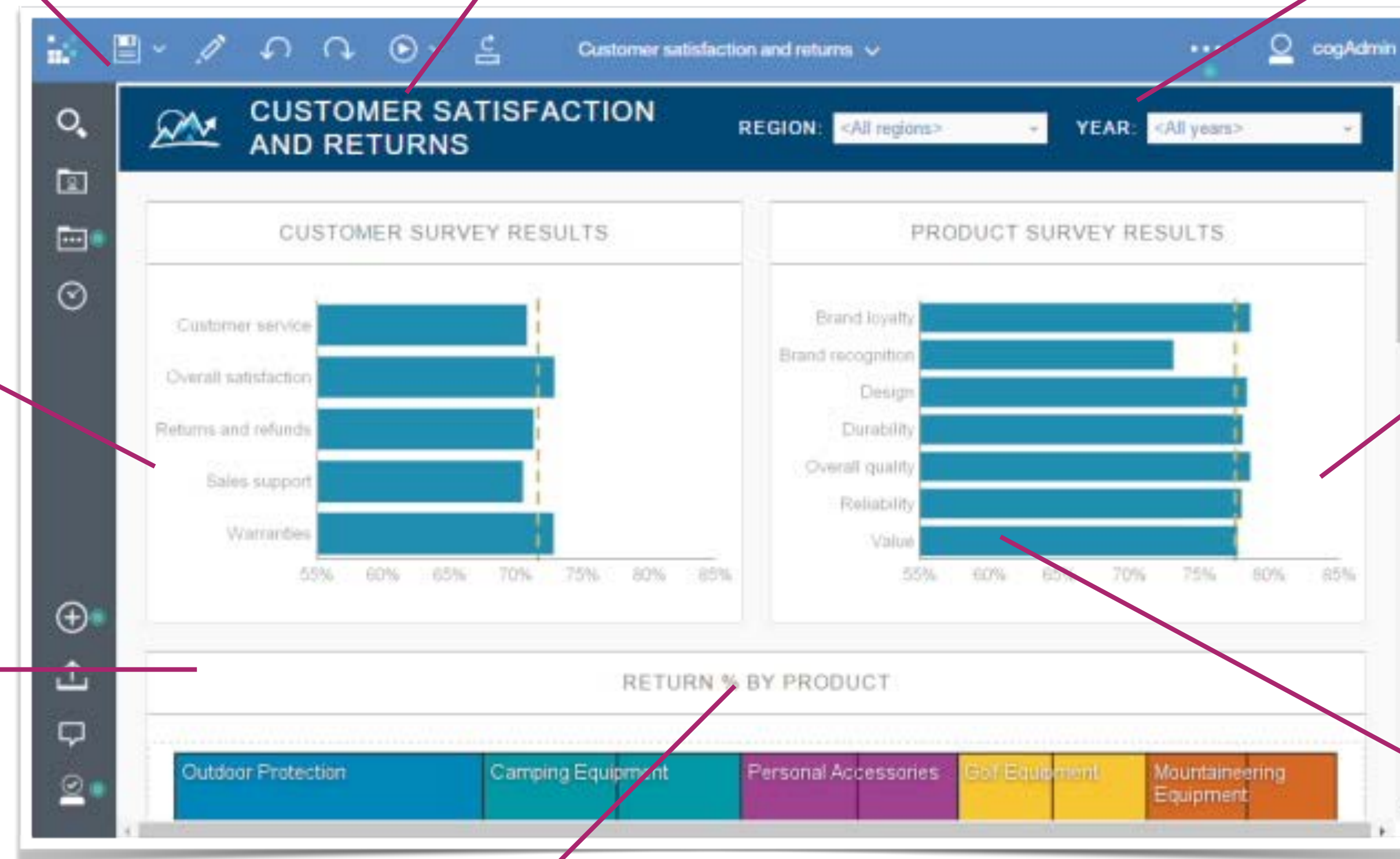
Symmetry

- Symmetrical balance has been applied here, with equal sizing and space used for the visualisations.
- This helps create harmony within the design and provides an even distribution on screen.

Consistency

- Consistent use of color across the whole of the design.
- The blue heading bar and blue bar charts match, along with the consistent grey chart titles.

Alignment

- Each chart is correctly aligned both vertically and horizontally which helps with easy reading.

CUSTOMER SATISFACTION AND RETURNS

REGION: <All regions>   YEAR: <All years>

CUSTOMER SURVEY RESULTS

Customer service
Overall satisfaction
Returns and refunds
Sales support
Warranties

55% 60% 65% 70% 75% 80% 85%

PRODUCT SURVEY RESULTS

Brand loyalty
Brand recognition
Design
Durability
Overall quality
Reliability
Value

55% 60% 65% 70% 75% 80% 85%

RETURN % BY PRODUCT

Outdoor Protection | Camping Equipment | Personal Accessories | Golf Equipment | Mountaineering Equipment

Customer satisfaction and returns   cogAdmin

Emphasis

- These key KPIs have been emphasised through size and colour to stand out and draw attention first.
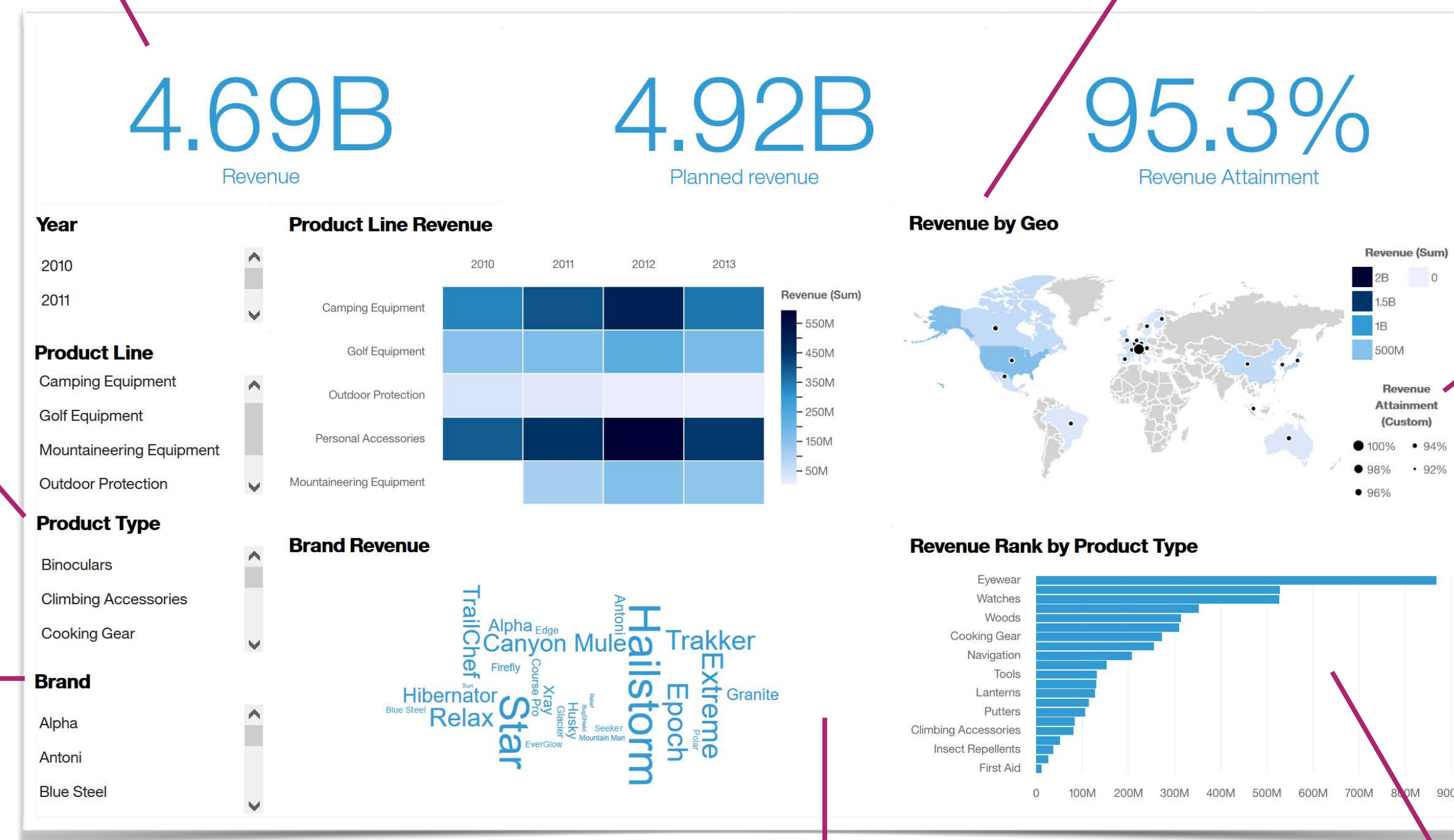
Chart Titles

- Every chart here has a correctly labelled title to inform the user as to what they are looking at.
- They each are consistent in style and formatting.

Filter labels

- Labels have been added to each of these filters to provide context.

Consistency

- KPIs, visualization headers, colours and font styling are consistent throughout the design.

Filter Emphasis

- Incorrect usage of Bold emphasis with the filter labels, as the sizing and styling match the visualisation titles.
- Avoid using the same styling for filter titles and visualisation titles. The charts should be the elements that stand out, not your filters.
- Try decreasing the font size to help improve.

White Space

- There is clear use of white space surrounding each element, allowing content to breathe.
- The overall design is not compact, which helps with readability.

Visualization

- The bar chart has been ranked in descending order of contributing revenue and this is a great way of organising the data to extract key information immediately.

4.69B Revenue

4.92B Planned revenue

95.3% Revenue Attainment

Year: 2010, 2011

Product Line: Camping Equipment, Golf Equipment, Mountaineering Equipment, Outdoor Protection

Product Type: Binoculars, Climbing Accessories, Cooking Gear

Brand: Alpha, Antoni, Blue Steel

Product Line Revenue

Brand Revenue

Revenue by Geo

Revenue Rank by Product Type

Navigation Feedback

- Clear indication back to the user which tab we are viewing.
- Simple yet effective use of visual cues, to help increase usability and provide interaction feedback.

Hierarchy

- The primary focus of this dashboard is the dominating column chart "Types of Activities" which has been emphasised by size and takes up more than half the page.
- Our eyes are drawn immediately to this chart.

Proximity

- Relationships have been formed through effective use of grouping.
- Several units have been formed within this dashboard, such as the column of 3 areas, Stage of Activities, Internal Role and Quick Links.

Chart Colours

- Each of the 4 colors used in different charts have their own individual meaning.
- This could mislead users thinking they each relate to one another.

Background

- Dark themed dashboard with a simple, plain coloured background.
- There are no distracting patterns or images used but still provides impact with contrasting colours for visualisations.

Alignment

- 2 clear yet invisible columns have been created through white space and the correct alignment of charts.

Social Data Application

Activity   Community   Profiles   Services

edit   + new update

Stage of Activities

- Rejected
- Completed
- Pending
- Active

17,232
Quarter 3
Activities

Internal Role Activities

Contract		40
Technical		157
Legal		123
Finance		215

My Quick Links

Roll-out Activity   >
My Assignments   >
System Connection   >

Types of Activities

- Info Updates
- Key Updates
- Services Onboard
- New Onboarding

Jan Feb Mar Apr May Jun Jul **Aug** Sep Oct Nov Dec

Hierarchy

- There is a clear visual hierarchy here of two areas to guide through.
- The stages are clearly labelled through numbering as if to suggest there is a process to follow.
- This style of design helps users scan through content and understand context.

Emphasis

- The correct use of the color orange has helped emphasis the current interactive icon.
- The table column headings have also been emphasised with color to highlight text.

White Space

- An overall clean looking report with clear headings and content spaced out correctly.

Alignment

- 2 clear yet invisible columns have been created through white space and the correct alignment of elements.

Color

- Orange has been used a the key accent colour to guide and emphasise content.
- The orange icon for "Customer" has been highlighted to act as a visual cue back to the user.
- Only 3 main colours have been used within this dashboard and nothing distracts the eye.

Consistency

- The icons are consistent in style, size and annotation.
- All titles, text size and formatting are consistent throughout the design.
- These repeated elements will help improve a user's mental model when navigating through.

IBM — Customer Search

1. Find your customer

Customer | City | Code

A	B	C	D	E
É	F	G	H	I
J	K	L	M	N
O	P	R	S	T
U	V	W	Z	

2. Results

Customer	Retailer City	Site Code
Aarde Rond Bv.	St-Maartensvlotbrug	20700
Aarhus Sport	Ballerup	20653
ActiForme	Paris	20195
ActiForme	Paris	20196
ActiForme	Strasbourg	20197
Action Factory	Kuopio	20795
Air frais	Paris	20843
Air marin	Lyon	20870
Aktiv Markt	München	20773
Aktive Freizeit	Passau	20461
Alles für Draußen	Kirchberg	20414
Allo Allo	Bruxelles	20428
Allt för camping AB	Umeå	20767
Alpenfreizeit	Bremen	20488
Alpin Sport	Aargau	20721
Altitudes extrêmes	Bordeaux	20205
Altitudes extrêmes	Chamonix	20206

✓ Alignment

- The KPI metrics are clearly aligned with each other and helps promote a clean layout.

✓ KPI Context

- The KPIs each have their own status icon, to display whether there has been an improvement or not.
- Color and icons have been correctly used here to provide further context and meaning.

✓ Chart Titles

- All charts on page each have their own title, which again helps promote usability and provides context to the user.

✓ Proximity

- The KPI status icons and percentage context have been placed within close proximity to its relative KPI metrics.
- The treemap is also within close proximity to these KPIs, which indicate a direct relationship is formed between the two elements.

✓ Backgrounds

- Each chart has their own background against the dashboard's background, which produces a nice tiled effect.
- The backgrounds are plain and simple, letting the data stand out on the page.

✓ Alignment

- All charts have been correctly aligned with vertical and horizontal alignment.

Product Line Revenue QTD Overview

| Camping Equipment | Golf Equipment | Mountaineering Equipment |
| 53,939 ▼(3%) | 25,130 ▲8% | 21,635 ▲5% |

| Outdoor Protection | Personal Accessories |
| 707 ▲10% | 65,032 ▲9% |

Personal Accessories · Camping Equipment · Golf Equipment · Mountaineering Equipment · Ou...

Trend Analysis - Revenue

Prior Year Revenue $1496M ▲ 29% **Prior Year Expenses** $873M ▲ 26%

Employee Overview

YTD Overall Target — 86% Against Plan

Performance Ranking - Top 10 Products